UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☑ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2019;

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number 001-38161

Calyxt, Inc.
(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	27-1967997 (I.R.S. Employer Identification No.)
2800 Mount Ridge Road Roseville, MN (Address of principal executive offices)	55113-1127 (Zip Code)

(651) 683-2807
(Registrant's telephone number, including area code)

N/A
(Former name, former address and former fiscal year, if changed since last report)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock (0.0001 par value)	CLXT	The NASDAQ Global Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	☐	Accelerated filer	☑
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☑

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☑ No

As of August 6th, 2019, there were 32,866,100 shares of common stock, $0.0001 par value per share, outstanding.

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Terms

When we use the terms "we," "us," the "Company," or "our" in this report, unless the context otherwise requires, we are referring to Calyxt, Inc. When we use the term "Cellectis," we are referring to Cellectis S.A., our majority stockholder.

We own the name and trademark, Calyxt® and Calyno™; we also own or license other trademarks, trade names and service marks of Calyxt appearing in this Quarterly Report on Form 10-Q. The name and trademark "Cellectis®" and "TALEN®", and other trademarks, trade names and service marks of Cellectis appearing in this Quarterly Report are the property of Cellectis. This Quarterly Report also contains additional trade names, trademarks and service marks belonging to other companies. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report contains "forward-looking statements" made in reliance on the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

In some cases, you can identify these statements by forward-looking words such as "may," "might," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential" or "continue," the negative of these terms and other comparable terminology. These forward-looking statements, which are based on our current assumptions and expectations, are subject to risks and uncertainties. Forward-looking statements in this report may include statements about our future financial performance, product pipeline and development, commercialization efforts, and growth strategies. These statements are only predictions based on our current expectations and projections about future events. Our actual results could be materially different that those expressed, implied or anticipated by the forward-looking statements.

There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. Those factors are discussed under the caption entitled "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the Securities and Exchange Commission (SEC) on March 12, 2019 (our Annual Report).

Any forward-looking statement made by us in this Quarterly Report is based only on information currently available to us and speaks only as of the date of this report. We do not assume any obligation to publicly provide revisions or updates to any forward-looking statements after the date of this Quarterly Report, whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws.

Market Data

Unless otherwise indicated, information contained in this Quarterly Report concerning our industry and the markets in which we operate is based on information from various sources, including independent industry publications. In presenting this information, we have also made assumptions based on such data and other similar sources, and on our knowledge of, and our experience to date in, the potential markets for our product. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section entitled "Risk Factors" in our Annual Report. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

Website Disclosure

We use our website (www.calyxt.com), our corporate Twitter account (@Calyxt_Inc) and our corporate LinkedIn account (https://www.linkedin.com/company/calyxt-inc) as routine channels of distribution of company information, including press releases, analyst presentations, and supplemental financial information, as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor our website and our corporate Twitter and LinkedIn accounts in addition to following press releases, filings with the SEC, and public conference calls and webcasts. Additionally, we provide notifications of announcements as part of our website. Investors and others can receive notifications of new press releases posted on our website by signing up for email alerts.

None of the information provided on our website, in our press releases or public conference calls and webcasts or through social media is incorporated into, or deemed to be a part of, this Quarterly Report or in any other report or document we file with the SEC, and any references to our website or our corporate Twitter and LinkedIn accounts are intended to be inactive textual references only.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

CALYXT, INC.
BALANCE SHEETS
(In Thousands, Except Par Value and Share Amounts)

	June 30, 2019 (unaudited)	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	**$ 76,434**	$ 93,794
Restricted cash	**381**	381
Trade accounts receivable	**810**	—
Due from related parties	**78**	46
Inventory	**111**	—
Prepaid expenses and other current assets	**1,470**	1,301
Total current assets	**79,284**	95,522
Non-current restricted cash	**1,128**	1,113
Land, buildings, and equipment	**22,480**	21,850
Other non-current assets	**684**	306
Total assets	**$ 103,576**	$ 118,791
Liabilities and stockholders’ equity		
Current liabilities:		
Accounts payable	**$ 395**	$ 818
Accrued expenses	**1,993**	2,007
Accrued compensation and benefits	**1,238**	1,305
Due to related parties	**781**	1,905
Current portion of financing lease obligations	**308**	258
Other current liabilities	**253**	711
Total current liabilities	**4,968**	7,004
Financing lease obligations	**18,259**	18,227
Other non-current liabilities	**159**	163
Total liabilities	**$ 23,386**	$ 25,394
Stockholders’ equity:		
Common stock, $0.0001 par value; 275,000,000 shares authorized; 32,918,599 shares issued and 32,859,700 shares outstanding as of June 30, 2019, and 32,664,429 shares issued and 32,648,893 shares outstanding as of December 31, 2018	**$ 3**	$ 3
Additional paid-in capital	**180,237**	176,069
Common stock in treasury, at cost; 58,899 shares	**(789)**	(230)
Accumulated deficit	**(99,223)**	(82,445)
Accumulated other comprehensive loss	**(38)**	—
Total stockholders’ equity	**80,190**	93,397
Total liabilities and stockholders’ equity	**$ 103,576**	$ 118,791

See accompanying notes to these financial statements.

CALYXT, INC.
STATEMENTS OF OPERATIONS
(Unaudited and in Thousands Except Shares and Per Share Amounts)

	Three months ended June 30,		Six months ended June 30,	
	2019	**2018**	**2019**	**2018**
Revenue	**$ 408**	$ 196	**$ 566**	$ 207
Operating expenses:				
Cost of revenue	**303**	—	**337**	—
Research and development	**2,738**	3,241	**4,957**	4,410
Selling and general and administrative	**6,408**	4,048	**11,475**	6,603
Management fees and royalties	**451**	399	**812**	982
Total operating expenses	**9,900**	7,688	**17,581**	11,995
Loss from operations	**(9,492)**	(7,492)	**(17,015)**	(11,788)
Interest, net	**92**	(72)	**264**	(140)
Foreign currency transaction loss	**(3)**	(12)	**(27)**	(18)
Loss before income taxes	**(9,403)**	(7,576)	**(16,778)**	(11,946)
Income taxes	**—**	—	**—**	—
Net loss	**$ (9,403)**	$ (7,576)	**$ (16,778)**	$ (11,946)
Basic and diluted loss per share	**$ (0.29)**	$ (0.25)	**$ (0.51)**	$ (0.41)
Weighted average shares outstanding - basic and diluted	**32,732,988**	29,840,827	**32,704,834**	28,851,491

See accompanying notes to these financial statements.

CALYXT, INC.
STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited and in Thousands Except Shares Outstanding)

	Shares Outstanding	Common Stock	Additional Paid-In Capital	Shares in Treasury	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balances at December 31, 2018	32,648,893	$ 3	$ 176,069	$ (230)	$ (82,445)	$ —	$ 93,397
Net loss	—	—	—	—	(16,778)	—	(16,778)
Stock based compensation	254,170	—	3,860	—	—	—	3,860
Issuance of common stock	—	—	308	—	—	—	308
Shares withheld for net share settlement	(43,363)	—	—	(559)	—	—	(559)
Other comprehensive loss	—	—	—	—	—	(38)	(38)
Balances at June 30, 2019	**32,859,700**	**$ 3**	**$ 180,237**	**$ (789)**	**$ (99,223)**	**$ (38)**	**$ 80,190**
Balances at March 31, 2019	32,692,189	$ 3	$ 177,750	$ (230)	$ (89,820)	$ —	$ 87,703
Net loss	—	—	—	—	(9,403)	—	(9,403)
Stock based compensation	210,874	—	2,304	—	—	—	2,304
Issuance of common stock	—	—	183	—	—	—	183
Shares withheld for net share settlement	(43,363)	—	—	(559)	—	—	(559)
Other comprehensive loss	—	—	-	—	—	(38)	(38)
Balances at June 30, 2019	**32,859,700**	**$ 3**	**$ 180,237**	**$ (789)**	**$ (99,223)**	**$ (38)**	**$ 80,190**

	Shares Outstanding	Common Stock	Additional Paid-In Capital	Shares in Treasury	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balances at December 31, 2017	27,718,780	$ 3	$ 112,021	$ —	$ (54,548)	$ —	$ 57,476
Net loss	—	—		—	(11,946)	—	(11,946)
Stock based compensation	559,826	—	3,668	—	—	—	3,668
Issuance of common stock	4,057,500	—	57,041	—	—	—	57,041
Repurchase of stock	—	—	—	—	—	—	—
Other comprehensive loss	—	—	—	—	—	—	—
Balances at June 30, 2018	**32,336,106**	**$ 3**	**$ 172,730**	**$ —**	**$ (66,494)**	**$ —**	**$ 106,239**
Balances at March 31, 2018	27,954,781	$ 3	$ 112,775	$ —	$ (58,918)	$ —	$ 53,860
Net loss	—	—	—	—	(7,576)	—	(7,576)
Stock based compensation	559,826	—	3,668	—	—	—	3,668
Issuance of common stock	3,821,499	—	56,287	—	—	—	56,287
Repurchase of stock	—	—	—	—	—	—	—
Other comprehensive loss	—	—	—	—	—	—	—
Balances at June 30, 2018	**32,336,106**	**$ 3**	**$ 172,730**	**$ —**	**$ (66,494)**	**$ —**	**$ 106,239**

See accompanying notes to these financial statements.

CALYXT, INC.
STATEMENTS OF CASH FLOWS
(Unaudited and in Thousands)

	Six months ended June 30, 2019	Six months ended June 30, 2018
Operating activities		
Net loss	**$ (16,778)**	$ (11,946)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	**689**	371
Stock-based compensation	**3,860**	2,427
Unrealized foreign exchange gain	**—**	6
Changes in operating assets and liabilities:		
Trade accounts receivable	**(810)**	—
Due to/from related parties	**(1,156)**	47
Inventory	**(111)**	—
Prepaid expenses and other assets	**(169)**	(799)
Accounts payable	**(423)**	25
Accrued expenses	**(14)**	275
Accrued compensation and benefits	**(67)**	(318)
Other accrued liabilities	**(513)**	1,084
Other non-current assets	**(378)**	—
Net cash used by operating activities	**(15,870)**	(8,828)
Investing activities		
Purchases of land, buildings and equipment	**(1,319)**	(498)
Net cash used by investing activities	**(1,319)**	(498)
Financing activities		
Costs incurred related to the issuance of stock	**—**	(665)
Proceeds from issuance of common stock	**—**	57,706
Repayments of financing lease obligations	**(122)**	—
Proceeds from the exercise of stock options	**308**	1,241
Costs incurred related to shares withheld for net share settlement	**(559)**	—
Proceeds from the sale and leaseback of land, buildings, and equipment	**217**	—
Net cash (used) provided by financing activities	**(156)**	58,282
Net (decrease) increase in cash, cash equivalents and restricted cash	**(17,345)**	48,956
Cash, cash equivalents and restricted cash - beginning of period	**95,288**	56,664
Cash, cash equivalents and restricted cash - end of period	**$ 77,943**	$ 105,620

See accompanying notes to these financial statements.

CALYXT, INC.
NOTES TO THE FINANCIAL STATEMENTS
(Unaudited)

1. BASIS OF PRESENTATION & SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Our unaudited financial statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) for interim financial information and with the rules and regulations of the Securities and Exchange Commission (SEC) applicable to interim financial statements. In our opinion, the accompanying financial statements reflect all adjustments necessary for a fair presentation of our statements of financial position, results of operations and cash flows for the periods presented but they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. Except as otherwise disclosed herein, these adjustments consist of normal recurring items. Operating results for interim periods are not necessarily indicative of results that may be expected for the fiscal year as a whole or any other interim period.

The preparation of the financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and the related disclosures at the date of the financial statements and during the reporting period. Actual results could materially differ from these estimates.

Certain prior year amounts have been reclassified to conform to the current year presentation.

For further information, refer to the audited financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on March 12, 2019. The accompanying Balance Sheet as of December 31, 2018 was derived from the audited financial statements. This Quarterly Report on Form 10-Q should be read in conjunction with our financial statements and notes included in the Annual Report on Form 10-K for the year ended December 31, 2018.

Inventory

Inventories are recorded at the lower of cost or net realizable value and include all costs of seed production and grain we purchase as well as costs to transport and process the grain into finished products. Consideration we receive from our growers to purchase seed is recorded as reduction in the cost of inventory.

We evaluate inventory balances for obsolescence quarterly using projected selling prices for our products, market prices for the underlying agricultural markets, the age of products, and other factors that take into consideration our limited operating history.

Effective January 1, 2019, we designated all seed and grain production agreements (Forward Purchase Contracts) as normal purchases and as a result no longer consider these agreements to be accounting derivatives. As a result, we no longer reflect these agreements at fair value. As of that date, any mark-to-market gains or losses were frozen on our balance sheet and will be reflected in inventory upon delivery as part of the cost of the associated grain.

Prior to the commercialization of our High Oleic Soybean Products in late February 2019, we expensed all costs associated with the production of seed and acquisition of grain, net of proceeds from seed sales, as research and development (R&D) expense.

Revenue Recognition

We recognize sales revenue at the point in time that control transfers to the customer, which is based on shipping terms. Sales include shipping and handling charges if billed to the customer and are reported net of trade promotion and other costs, including estimated allowances for returns, unsalable product, and prompt pay discounts. Sales, use, value-added and other excise taxes are not recognized in revenue. Trade promotions are recorded based on estimated participation and performance levels for offered programs at the time of sale. We generally do not allow a right of return. However, on a limited basis with prior approval, we may allow customers to return product.

We also recognize revenue from license agreements. Revenues from license agreements may consist of nonrefundable up-front payments, milestone payments, royalties, and services. In addition, we may license our technology to third parties, which may or may not be part of a license agreement.

Nonrefundable up-front payments are deferred and recognized as revenue over the term of the license agreement. If a license agreement is terminated before the original term of the agreement is fulfilled, all remaining deferred revenue is recognized at termination.

Milestone payments represent amounts received from our licensees, the receipt of which is dependent upon the achievement of certain scientific, regulatory, or commercial milestones. We recognize milestone payments when the triggering event has occurred, there are no further contingencies or services to be provided with respect to that event, and the counterparty has no right to refund of the payment.

Stock-Based Compensation

We measure employee stock-based awards at grant-date fair value and record compensation expense over the vesting period of the award. Prior to January 1, 2019, grants to nonemployees were previously remeasured each reporting period. Following the adoption of the new accounting pronouncement discussed below we no longer remeasure these awards as the fair value is determined on the grant date.

Recently Adopted Accounting Pronouncements

In the first quarter of 2019, we adopted new accounting requirements for recognition of revenue from contracts with customers. We adopted these requirements using the cumulative effect approach. The adoption did not have an impact on our financial statements.

Effective January 1, 2019, we adopted new accounting requirements for share-based payment transactions for acquiring goods and services from nonemployees. The adoption did not have an impact on our financial statements as each of the share-based payment awards granted to nonemployees had a measurement date upon grant, and thus no cumulative adjustment to retained earnings was required.

2. FINANCIAL INSTRUMENTS, FAIR VALUE, HEDGING ACTIVITIES, AND CONCENTRATIONS OF CREDIT RISK

The carrying values of cash and cash equivalents, restricted cash, due from related parties, accounts payable, due to related parties, and all other current liabilities approximate fair value. The fair value of our financing lease obligations, including the current portion, are $15.7 million as of June 30, 2019, and $15.8 million as of December 31, 2018. The carrying amounts of our financing lease obligations, including the current portion, were $18.6 million as of June 30, 2019, and $18.5 million as of December 31, 2018. The fair value of our financing lease obligations was determined using discounted cash flow analysis based on market rates for similar types of borrowings. Financing lease obligations are a Level 2 liability in the fair value hierarchy.

Fair Value Measurements and Financial Statement Presentation

As described in Note 1 to these financial statements our Forward Purchase Contracts are no longer carried at fair value.

The fair values of our assets, liabilities, and derivative positions recorded at fair value and their respective levels in the fair value hierarchy as of June 30, 2019 and December 31, 2018, were as follows:

	June 30, 2019				June 30, 2019			
	Fair Values of Assets				Fair Values of Liabilities			
In Thousands	**Level 1**	**Level 2**	**Level 3**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Other items reported at fair value:								
Forward Purchase Contracts (a)	$ —	$ 1	$ —	$ 1	$ —	$ 203	$ —	$ 203
Commodity futures and options	174	—	—	174	—	—	—	—
Total	**$ 174**	**$ 1**	**$ —**	**$ 175**	**$ —**	**$ 203**	**$ —**	**$ 203**

	December 31, 2018				December 31, 2018			
	Fair Values of Assets				Fair Values of Liabilities			
In Thousands	**Level 1**	**Level 2**	**Level 3**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Other items reported at fair value:								
Forward Purchase Contracts (a)	$ —	$ 1	$ —	$ 1	$ —	$ 248	$ —	$ 248
Commodity futures and options	—	—	—	—	—	—	—	—
Total	**$ —**	**$ 1**	**$ —**	**$ 1**	**$ —**	**$ 248**	**$ —**	**$ 248**

(a) The fair value for Forward Purchase Contracts were previously estimated based on commodity futures market prices.

Commodity Price Risk

We enter into Forward Purchase Contracts for grain with settlement values based on commodity futures market prices These Forward Purchase Contracts allow our counterparty to fix their sale prices to us at various times as defined in the contract. We may enter into hedging arrangements to either fix variable exposures or converting fixed prices to floating prices through the use of commodity derivative contracts. At June 30, 2019, we had entered into commodity contracts with a notional amount of $1.8 million.

We have designated all of our commodity derivative contracts as cash flow hedges. As a result, all gains or losses associated with recording commodity derivative contracts at fair value are recorded as a component of accumulated other comprehensive income (AOCI). We reclassify amounts from AOCI to cost of goods sold when we sell the underlying products to which those hedges relate. As of June 30, 2019, we expect the entire AOCI balance to be reclassified into earnings within the next 12 months.

Certain amounts related to our hedging activities are as follows:

	Amount of Gain (Loss) Recognized in AOCI		Amount of Gain (Loss) Reclassified to Earnings	
	Six months ended,		Six months ended,	
In thousands	**June 30, 2019**	**December 31, 2018**	**June 30, 2019**	**December 31, 2018**
Cash flow hedges:				
Commodity contracts	**$ (38)**	$ —	**$ —**	$ —
Total	**$ (38)**	$ —	**$ —**	$ —

Foreign Exchange Risk

Foreign currency fluctuations affect our foreign currency cash flows related to payments to Cellectis and third-party purchases. Our principal foreign currency exposure is to the euro. We do not currently hedge these exposures, and we do not believe that the current level of foreign currency risk is significant to our operations.

Concentrations of Credit Risk

We invest our cash, cash equivalents, and restricted cash in short-term investments and hold deposits at financial institutions that may exceed insured limits. We evaluate the credit worthiness of these institutions in determining the risk associated with these deposits. We have not experienced any losses on these deposits.

3. RELATED-PARTY TRANSACTIONS

We have several agreements that govern our relationship with Cellectis. Pursuant to our management services agreement with Cellectis, we also pay management fees for services Cellectis provides to us. We perform Cellectis' U.S. operations payroll services. We incurred management fee expenses of $0.5 million for the three months ended June 30, 2019 and $0.4 million for the same period in 2018. We incurred management fee expenses of $0.8 million for the six months ended June 30, 2019 and $1.0 for the same period in 2018.

Cellectis also has guaranteed our headquarters lease agreement. Cellectis' guarantee of our obligations under the sale-leaseback transaction will terminate at the end of the second consecutive calendar year in which our tangible net worth exceeds $300 million. Any amounts borrowed from Cellectis bear floating-rate interest at a rate of 12-month Euribor plus five percent per annum.

TALEN technology was invented by researchers at the University of Minnesota and Iowa State University and exclusively licensed to Cellectis. We obtained from Cellectis an exclusive license for the TALEN technology for commercial use in plants. TALEN technology is the primary gene-editing technology used by us today. We also license other key technology from Cellectis and owe them royalties on any revenue we generate from sales of product as well as a percentage of any sublicense revenues we generate. With the exception of a one-time payment made to the University of Minnesota related to our commercialization of High Oleic Soybeans, we have incurred nominal license fees under these agreements in in the three and six month periods ended June 30, 2019 and 2018.

4. NET LOSS PER SHARE

Basic and diluted loss per share were calculated using the following:

All outstanding stock options and restricted stock units are excluded from the calculation since they are anti-dilutive.

	Six months ended June 30,	
In Thousands, Except Share Data and Per Share Amounts	**2019**	**2018**
Net loss	**$ (16,778)**	$ (11,946)
Average number of common shares—basic and diluted EPS	**32,704,834**	28,851,491
Loss per share—basic and diluted	**$ (0.51)**	$ (0.41)

	2019	**2018**
Anti-dilutive stock options and restricted stock units	**5,592,441**	4,421,547

We have not used the treasury method in determining the number of anti-dilutive stock options and restricted stock units in the table above.

5. STOCK-BASED COMPENSATION

We use broad-based stock plans to attract and retain highly qualified officers and employees and to help ensure that management's interests are aligned with those of our shareholders. We have also granted equity-based awards to directors, nonemployees and certain employees of Cellectis.

In December 2014, we adopted the Calyxt, Inc. Equity Incentive Plan (2014 Plan), which allowed for the grant of stock options, and in June 2017, we adopted the 2017 Omnibus Plan (2017 Plan).

As of June 30, 2019, 2,006,505 shares were registered and available for grant under effective registration statements, while 2,444,581 shares were available for grant in the form of stock options, restricted stock, restricted stock units and performance stock units under the 2017 Plan. Stock-based awards currently outstanding also include awards granted under the 2014 Plan, under which no further awards will be granted.

Stock Options

The estimated fair values of stock options granted and the assumptions used for the Black-Scholes option pricing model were as follows:

	Six months ended June 30,	
	2019	**2018**
Estimated fair values of stock options granted	**$ 10.61**	$ 10.26
Assumptions:		
Risk-free interest rate	**1.9% - 2.5%**	2.5% - 2.8%
Expected volatility	**77.9% - 78.9%**	40.9% - 54.7%
Expected term (in years)	**6.8 – 10.0 years**	6.3 – 9.2 years

We estimate the fair value of each option on the grant date or other measurement date if applicable using a Black-Scholes option-pricing model, which requires us to make predictive assumptions regarding future stock price volatility, employee exercise behavior and dividend yield. The risk-free interest rate for periods during the expected term of the options is based on the U.S. Treasury zero-coupon yield curve in effect at the time of grant. We estimate our future stock price volatility using the historical volatility of comparable public companies over the expected term of the option. Our expected term represents the period of time that options granted are expected to be outstanding determined using the simplified method. We have not nor do we expect to pay dividends for the foreseeable future.

Option strike prices are set at 100 percent or more of the closing share price on the date of grant, and generally vest over six years following the grant date. Options generally expire 10 years after the date of grant.

Information on stock option activity follows:

	Options Exercisable		Weighted-Average Exercise Price Per Share	Options Outstanding		Weighted-Average Exercise Price Per Share
Balance as of December 31, 2018	1,278,038	$	7.45	3,201,887	$	10.67
Granted				1,490,000		14.75
Exercised				(85,452)		3.61
Forfeited or expired				(12,085)		17.72
Other activity				12,495		13.29
Balance as of June 30, 2019	**1,585,276**	**$**	**8.34**	**4,606,845**	**$**	**12.11**

Stock-based compensation expense related to stock option awards was $1.5 million for the three months ended June 30, 2019 and $1.4 million for the three months ended June 30, 2018. Stock-based compensation expense related to stock option awards was $2.3 million for the six months ended June 30, 2019, and $1.0 million for the six months ended June 30, 2018. The aggregate intrinsic value of options outstanding and exercisable at June 30, 2019 was $9.3 million and the weighted average remaining contractual term was 8.4 years as of that date.

Net cash proceeds from the exercise of stock options less shares used for minimum withholding taxes and the intrinsic value of options exercised were as follows:

	Three months ended June 30,				Six months ended June 30,			
In Thousands	**2019**		**2018**		**2019**		**2018**	
Net cash proceeds	**$**	**183**	$	527	**$**	**308**	$	1,241
Intrinsic value of options exercised	**$**	**527**	$	1,899	**$**	**880**	$	5,159

Restricted Stock Units

Units settled in stock subject to a restricted period may be granted under the 2017 Plan. Restricted stock units generally vest and become unrestricted over five years after the date of grant.

Information on restricted stock unit activity follows:

	Number of Restricted Stock Units Outstanding		Weighted-Average Grant Date Fair Value
Unvested balance at December 31, 2018	1,051,414	$	10.15
Granted	100,000		12.48
Vested	(168,718)		8.36
Forfeited	(2,000)		8.00
Unvested balance at June 30, 2019	**980,696**	**$**	**10.62**

The total grant-date fair value of restricted stock unit awards that vested was $1.3 million and $1.4 million for the three and six months ended June 30, 2019, and $1.5 million for three and six months ended June 30, 2018. Stock-based compensation expense related to restricted stock unit awards was $0.8 million and $1.6 million for the three and six months ended June 30, 2019, and $0.9 million and $1.2 million for the three and six months ended June 30, 2018

We treat stock-based compensation awards granted to employees of Cellectis as deemed dividends. We recorded deemed dividends of $0.4 million and $0.8 million for the three and six months ended June 30, 2019, and $0.7 million and $1.4 million for the three and six months ended June 30, 2018.

As of June 30, 2019, unrecognized compensation expense related to non-vested stock options and restricted stock units was $22.4 million. This expense will be recognized over 61 months on average for stock options and over 42 months on average for restricted stock units.

Performance Stock Units

On June 28, 2019, we granted 311,667 performance stock units to three executive officers. The performance stock units will vest as to 50%, 100% or 120% of the shares at the end of a three-year performance period based upon the increases in our common stock from the starting price of $12.48 The awards vest on a linear basis between vesting percentages during specified periods within the three-year performance period. If vested, the performance stock units will be settled in restricted stock with restrictions lapsing on the two-year anniversary of the date of issuance.

Cellectis Equity Incentive Plan

Prior to 2018, Cellectis granted stock options to our employees. Compensation costs related to these grants have been recognized in the statements of operations with a corresponding credit to stockholders' equity representing Cellectis' capital contribution to us. The fair value of each stock option was estimated at the grant date using the Black-Scholes option pricing model.

We recognized stock-based compensation expense related to Cellectis' grants of $0.1 million for the three months ended June 30, 2018 and $0.2 million for the six months ended June 30, 2018. Expenses in 2019 were de minimus.

6. INCOME TAXES

We provide for a valuation allowance when it is more likely than not that we will not realize a portion of the deferred tax assets. We have established a full valuation allowance for deferred tax assets due to the uncertainty that enough taxable income will be generated in the taxing jurisdiction to utilize the assets. Therefore, we have not reflected any benefit of such deferred tax assets in the accompanying financial statements.

As of June 30, 2019 there were no material changes to what we disclosed regarding tax uncertainties or penalties as of December 31, 2018.

7. LEASES, OTHER COMMITMENTS, AND CONTINGENCIES

Litigation and Claims

We are not currently a party to any material pending legal proceeding.

Leases

We lease our headquarters facility, office equipment, and other items. Our headquarters lease involved the sale of land and improvements to a third party who then constructed the facility. This lease is considered a finance lease.

We also have an equipment financing line that is considered a financing lease. The lease has a term of four years and following our $0.2 million draw down in the three month period ending June 30, 2019, we may add up to $0.9 million of future equipment purchases to the financing agreement. We were required to deposit cash into a restricted account in an amount equal to the future rent payments required by the lease. At June 30, 2019, this restricted cash totaled $1.5 million.

Rent expense from operating leases was $20,000 for the three months ended June 30, 2019, and was $78,000 for the three months ended June 30, 2018. Rent expense was expense $69,000 for the six months ended June 30, 2019, and was $160,000 during the six months ended June 30, 2018.

Other Commitments

As of June 30, 2019, we have committed to purchase grain from farmers at dates throughout 2019 and 2020 aggregating $19.0 million using commodity futures market prices, other payments to growers and estimated yields per acre. This amount is not recorded in the financial statements because we have not taken delivery of the grain as of that date.

8. EMPLOYEE BENEFIT PLAN

We provide a 401(k) defined contribution plan for all regular full-time employees who have completed three months of service. We match employee contributions up to certain amounts and those matching contributions vest immediately. Our expense was $49,000 for the three months ended June 30, 2019 and $27,000 for the same period in 2018. Our expense was $105,000 for the six months ended June 30, 2019, and $76,000 for the six months ended June 30, 2018.

9. SUPPLEMENTAL INFORMATION

Certain balance sheet amounts are as follows:

In Thousands	As of June 30, 2019	As of December 31, 2018
Raw materials	$ 79	$ —
Work-in-process	18	—
Finished goods	14	—
Total	$ 111	$ —

Certain statements of operations amounts are as follows:

In Thousands	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Stock compensation expense:				
Research and development	$ 539	$ 1,325	$ 779	$ 888
Selling and general and administrative	1,765	967	3,081	1,336
Total	$ 2,304	$ 2,292	$ 3,860	$ 2,224

In Thousands	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Interest expense	$ (370)	$ (317)	$ (740)	$ (552)
Interest income	462	245	1,004	412
Interest, net	$ 92	$ (72)	$ 264	$ (140)

Certain statements of cash flows amounts are as follows:

In Thousands	As of June 30, 2019	As of June 30, 2018
Cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 76,434	$ 105,620
Restricted cash, current	381	—
Non-current restricted cash	1,128	—
Total	$ 77,943	$ 105,620

In Thousands	As of June 30, 2019	As of June 30, 2018
Supplemental cash flow information		
Interest paid	$ 737	$ 207

In Thousands	As of June 30, 2019	As of June 30, 2018
Supplemental non-cash investing and financing transactions		
Sale and leaseback of land, buildings, and equipment	$ 217	$ —
Non-cash additions to land, buildings, and equipment	—	7,096
Offering costs in accounts payable and accrued liabilities	—	445
Non-cash addition to financing lease obligations	12	—
Total	$ 229	$ 7,541

10. Segment Information

We operate in a single reportable segment, food ingredients. Our current commercial focus is North America. Our major product categories are High Oleic Soybean Oil and High Oleic Soybean Meal.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read together with our financial statements and related notes, which are included elsewhere in this Quarterly Report on Form 10-Q. Our actual results could differ materially from those anticipated in the forward-looking statements included in this discussion as a result of certain factors, including, but not limited to, those discussed in "Risk Factors" in our Annual Report on Form 10-K filed on March 12, 2019.

EXECUTIVE OVERVIEW

We are a healthy food ingredient company. We leverage proprietary intellectual property, our technical expertise, and an end-to-end supply chain toward our mission of "Making the Food You Love a Healthier Choice™".

Using our proprietary technologies and expertise, including TALEN gene-editing technology exclusively licensed to us in the field of agriculture, we develop food crops with targeted traits quickly and more cost effectively than traditional methods. Our technologies enable precise cuts to DNA in a single plant cell. This allows us to use the plant's natural repair machinery to make our desired genome edit and regenerate the single cell into a full plant that includes this gene edit. We believe that we are able to identify a consumer need and develop a product from "concept to fork" in cycles as short as six years by utilizing these proprietary technologies.

We believe that we are well-positioned to address consumer preferences that are evolving to demand healthier, more nutritionally rich foods. To bring our consumer-centric products to the marketplace, we intend to repurpose and leverage existing supply chain capacity by contracting, tolling or partnering with players in the existing supply chain, such as seed production companies, seed distributors, farmers, crushers, millers, and refiners. We expect this will allow us to apply our resources to maximizing innovation and product development while minimizing our capital expenditures and overhead. We intend to strategically out-license our intellectual property to maximize our market opportunity.

Our first commercial products are oil and meal derived from a High Oleic Soybean designed to produce a healthier oil that has increased heat stability with zero grams of trans fat per serving. We completed our first sales of our High Oleic Soybean Oil and High Oleic Soybean Meal in the first quarter of 2019. Among our other product candidates are other soybean products and a High Fiber Wheat.

Our current commercial focus is North America. This may expand over time to other geographies, subject to customer demand and regulatory requirements, among other factors. We also intend to explore the ability to add value through our existing product candidates once they are commercialized by combining traits in the same crop, which may allow us to deliver products with additional benefits without adding significant cost.

We are an early-stage company and have incurred net losses since our inception. As of June 30, 2019, we had an accumulated deficit of $99.2 million. Our net losses were $9.4 million for the three months ended June 30, 2019 and $7.6 million for the three months ended June 30, 2018. Costs incurred in connection with our R&D programs and to compensate our employees, including non-cash stock compensation expense, are the primary drivers of our net loss. As we continue to develop our product pipeline, we expect to continue to incur significant expenses and increasing operating losses for the foreseeable future and those expenses and losses may fluctuate significantly from quarter-to-quarter and year-to-year. We expect that our expenses will increase substantially as we:

- build out a sales, marketing and distribution infrastructure, including relationships across our supply chain, to commercialize products that have completed the development process;
- conduct additional breeding and field trials of our current and future product candidates;
- secure manufacturing arrangements for commercial production;
- continue to advance the R&D of our current and future product candidates;
- seek to identify and validate additional product candidates;
- acquire or in-license other product candidates, technologies, germplasm or other biological material;
- are required to seek regulatory and marketing approvals for our product candidates;
- make royalty and other payments under any in-license agreements;
- maintain, protect, expand and defend our intellectual property portfolio;
- seek to attract and retain new and existing skilled personnel;
- invest in our infrastructure to support the scale-up of the business; and
- experience any delays or encounter issues with any of the above.

As of June 30, 2019, we had cash, cash equivalents and restricted cash of $77.9 million. While we achieved commercialization in the first quarter of 2019, we do not expect to generate significant revenue from product sales unless and until we are able to fully commercialize our High Oleic Soybean products and one or more other current or future product candidates, which may take a number of years and is subject to significant uncertainty. See "Capital Resources."

OUR RELATIONSHIP WITH CELLECTIS AND COMPARABILITY OF OUR RESULTS

We are a majority-owned subsidiary of Cellectis. As of June 30, 2019, Cellectis owned 69.1% of our outstanding common stock.

Our historical financial information reflects expense allocations for certain support functions that were provided on a centralized basis pursuant to a management services agreement. Cellectis has also guaranteed the lease of our headquarters facility. As a result, our historical financial information may not reflect the financial condition, results of operations or cash flows we would have achieved as a standalone company and not a subsidiary of Cellectis during the periods presented.

Cellectis also has certain contractual rights as long as it maintains threshold beneficial ownership levels in our shares.

In addition, we hold an exclusive, worldwide license in plants to key intellectual property owned by Cellectis.

RESULTS OF OPERATIONS FOR THREE MONTHS ENDED JUNE 30, 2019 AND 2018

In the three months ended June 30, 2019, we continued to sell our first products, High Oleic Soybean Oil and High Oleic Soybean Meal. We continued to incur costs associated with commercialization, including expanding our supply chain. Upon achieving commercialization, we started capitalizing purchases of grain as inventory.

A summary of our results of operations for the three months ended June 30, 2019 and 2018 follows:

	Three Months Ended June 30,			
	2019	**2018**	**$ Change**	**% Change**
	(In thousands, except percentage values)			
Revenue	**$ 408**	$ 196	$ 212	108.2 %
Cost of goods sold	**303**	—	303	nm
Research and development expense	**2,738**	3,241	(503)	(15.5)%
Selling and general and administrative expense	**6,408**	4,048	2,360	58.3 %
Management fees and royalties	**451**	399	52	13.0 %
Interest, net	**92**	(72)	164	(227.8)%
Other income and expense	**(3)**	(12)	9	(75.0)%
Net loss	**$ (9,403)**	$ (7,576)	$ (1,827)	24.1 %

Revenue and Cost of Goods Sold

Revenue increased $0.2 million in the three months ended June 30, 2019, compared to the same period a year ago. The increase in revenue was driven by the commercialization of our first products, High Oleic Soybean Oil and High Oleic Soybean Meal. Cost of goods sold in the three months ended June 30, 2019, reflect supply chain costs associated with the processing and transportation of grain we purchased prior to commercialization as well as certain costs incurred to process and handle grain following commercialization as not all costs in our supply chain are capitalizable to inventory. During the three months ended June 30, 2019, we also recorded a reserve of $82,000 for seed returns.

Prior to commercialization in the first quarter of 2019 we expensed all costs associated with our High Oleic Soybean as R&D expense. As a result, our current period cost of goods sold are less on a unit basis than what we expect them to be now that we have reached commercialization, and current margins are not representative of future margins.

Research and Development Expenses

The decrease in the three months ended June 30, 2019 was due to a $0.8 million decrease non-cash stock compensation expense partially offset by an increase in cash expenses associated with additional staff.

Selling and General, and Administrative Expenses

Selling and General and Administrative expenses increased $2.4 million in the three months ended June 30, 2019, compared to the same period a year ago. The increase was due to an additional $1.6 million in compensation and benefits associated with additional personnel, including contractors, to support the commercialization of our High Oleic Soybeans products in sales and supply chain and an increase in non-cash stock compensation expense of $0.8 million. Professional services expenses were slightly down year over year.

Interest, net

Interest, net is the result of interest income resulting from investments of cash and cash equivalents, partially offset by interest expense on our financing lease obligations. It is also driven by balances, yields, and timing of our capital raises and financing activities.

RESULTS OF OPERATIONS FOR SIX MONTHS ENDED JUNE 30, 2019 AND 2018

A summary of our results of operations for the six months ended June 30, 2019 and 2018 follows:

	Six Months Ended June 30,			
	2019	**2018**	**$ Change**	**% Change**
Revenue	**$ 566**	$ 207	$ 359	173.4 %
Cost of goods sold	**337**	—	337	nm
Research and development expense	**4,957**	4,410	547	12.4 %
Selling and general and administrative expense	**11,475**	6,603	4,872	73.8 %
Management fees and royalties	**812**	982	(170)	(17.3)%
Interest, net	**264**	(140)	404	(288.6)%
Other income and expense	**(27)**	(18)	(9)	50.0 %
Net loss	**$ (16,778)**	$ (11,946)	$ (4,832)	40.4 %

Revenue and Cost of Goods Sold

Revenue increased $0.4 million in the six months ended June 30, 2019, compared to the same period a year ago. The increase in revenue was driven by the same activity discussed above during the three months ended June 30, 2019.

Research & Development

The $0.5 million increase in the six months ended June 30, 2019, compared to the same period a year ago was primarily due to increased expenses of $0.7 million related to additional staff partially offset by a decrease in non-cash stock compensation expense of $0.2 million.

Selling and General and Administrative Expenses

Selling and General and Administrative expenses increased $4.9 million in the six months ended June 30, 2019, compared to the same period a year ago. The increase was driven by an additional $3.2 million in expenses related to the addition of personnel, including contractors, to support the commercialization of our High Oleic Soybean products in sales and supply chain and an increase in non-cash stock compensation expense of $1.7 million.

Interest, net

Interest, net is the result of interest income resulting from investments of cash and cash equivalents, partially offset by interest expense on our financing lease obligations. It is driven by balances, yields, and timing of our capital raises and financing activities.

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

As of June 30, 2019, we had cash, cash equivalents and restricted cash of $77.9 million.

We incurred losses from operations of $17.0 million for the six months ended June 30, 2019, and $11.8 million for the six months ended June 30, 2018. As of June 30, 2019, we had an accumulated deficit of $99.2 million and we expect to incur losses for the foreseeable future.

Cash Flows from Operating Activities

	Six months ended June 30,	
In Thousands	**2019**	**2018**
Net loss	**$ (16,778)**	$ (11,946)
Depreciation	**689**	371
Stock-based compensation	**3,860**	2,427
Unrealized foreign exchange gain	**—**	6
Changes in operating assets and liabilities	**(3,641)**	314
Net cash used by operating activities	**$ (15,870)**	$ (8,828)

Net cash used by operating activities was $15.9 million for the six months ended June 30, 2019, compared to net cash used by operating activities for the six months ended June 30, 2018 of $8.8 million. The change was largely due to expenses related to increased headcount and professional fees associated with expanding our commercial infrastructure and investing in our R&D pipeline, including purchasing grain.

Cash Flows from Investing Activities

	Six months ended June 30,	
In Thousands	**2019**	**2018**
Purchases of land, building, and equipment	**$ (1,319)**	$ (498)
Net cash used by investing activities	**$ (1,319)**	$ (498)

Net cash used by investing activities was $1.3 million for the six months ended June 30, 2019, compared to net cash used by investing activities for the six months ended June 30, 2019 in the amount of $0.5 million. The increase was due to purchases of lab equipment and furniture and fixtures for our new headquarters facility.

Cash Flows from Financing Activities

	Six months ended June 30,	
In Thousands	**2019**	**2018**
Costs incurred related to the issuance of stock	**$ —**	$ (665)
Proceeds from common stock issuance	**—**	57,706
Repayments of financing lease obligations	**(122)**	—
Proceeds from the exercise of stock options	**308**	1,241
Costs incurred related to shares withheld for net share settlement	**(559)**	—
Proceeds from the sale and leaseback of land, buildings and equipment	**217**	—
Net cash (used) provided by financing activities	**$ (156)**	$ 58,282

Net cash used by financing activities was $0.2 million for the six months ended June 30, 2019, compared to net cash provided by financing activities for the six months ended June 30, 2018 of $58.2 million. The decrease was primarily driven by the repurchase of shares in the six months ended June 30, 2019, and the receipt of proceeds from a follow-on public offering of common stock in the amount of $58.2 million in 2018.

CAPITAL RESOURCES

We have $308,000 of long-term financing obligations maturing in the next 12 months that are classified as current. Taking into account our anticipated cash burn rate, we believe our cash, cash equivalents and restricted cash as of June 30, 2019, will be sufficient to fund our operations through at least early 2021. The period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, which are described in our Annual Report.

Operating Capital Requirements

For the six month period ended June 30, 2019, we had generated $0.6 million in revenues from product sales. We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue to incur substantial expenses related to our public company obligations, the continued development of our product candidates, and the commercialization of our product candidates that complete the development process. We anticipate that we will need additional funding in connection with our continuing operations, including for the further development of our existing product candidates and to pursue other development activities related to additional product candidates.

Until we can generate substantial revenue from sales of our products, if ever, we expect to finance a portion of future cash needs through cash on hand and public or private equity or debt financings, government or other third-party funding and licensing arrangements. However, additional capital may not be available on reasonable terms, if at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates. Failure to receive additional funding could cause us to cease operations, in part or in full. If we raise additional funds through the issuance of additional debt or equity securities, it could result in dilution to our existing stockholders and increased fixed payment obligations, and these securities may have rights senior to those of our common shares. Any of these events could significantly harm our business, financial condition and prospects.

CONTRACTUAL OBLIGATIONS, COMMITMENTS AND CONTINGENCIES

There were no material changes except as follows, in our commitments under contractual obligations as disclosed in our Annual Report.

Sale-Leaseback of Equipment

In December 2018, we consummated a sale-leaseback transaction with a third party to finance equipment. The lease has a term of four years. In the three months ended June 30, 2019, we financed $217,000 of equipment on this facility and we may add up to $0.9 million of future equipment purchases to the financing agreement. We were required to deposit cash into a restricted account in an amount equal to the future rent payments required by the lease.

OFF BALANCE SHEET OBLIGATIONS

As of June 30, 2019, we do not have any off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of Regulation S-K.

CRITICAL ACCOUNTING POLICIES

The preceding discussion and analysis of our financial condition and results of operations are based upon our financial statements and the related disclosures, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts in our financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the policies discussed in Note 1, Basis of Presentation and Summary of Significant Accounting Policies, are the most critical to an understanding of our financial condition and results of operations because they require us to make estimates, assumptions and judgments about matters that are inherently uncertain.

Except as disclosed in Note 1, Basis of Presentation and Summary of Significant Accounting Policies, there have been no significant changes to our critical accounting policies disclosure reported in “Critical Accounting Estimates” in our Annual Report.

RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

In August 2017, the Financial Accounting Standards Board (FASB) issued new hedge accounting requirements. The new standard amends the hedge accounting recognition and presentation requirements to better align an entity’s risk management activities and financial reporting. The new standard also simplifies the application of hedge accounting guidance. The requirements of the new standard are effective for annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods, which for us is the first quarter of fiscal 2020. Early adoption is permitted. We do not expect this guidance to have any impact on our financial statements.

In February 2016, the FASB issued new accounting requirements for accounting, presentation and classification of leases. This will result in most leases being capitalized as a right of use asset with a related liability on our balance sheets. The requirements of the new standard are effective for annual reporting periods beginning after December 15, 2018, and interim periods within those annual periods, which for us is the first quarter of 2020 because we are an emerging growth company. We are in the process of analyzing the impact of this standard on our results of operations and financial position.

In June 2016, the FASB issued new accounting requirements on how to account for credit losses on most financial assets and certain other instruments. This will require the estimation of lifetime expected credit losses and corresponding recognition of allowance for losses on trade and other receivables, loans, and other instruments held at amortized cost. The ASU requires certain recurring disclosures and is effective for annual periods, and interim periods within those annual periods, beginning on or after December 15, 2019. We are in the process of analyzing the impact of this standard on our results of operations.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our primary exposures to market risk are commodity price and interest rate sensitivity.

For quantitative and qualitative disclosures about market risk that affect us, see "Quantitative and Qualitative Disclosures About Market Risk in Item 7A of Part II of the Annual Report. We enter into supply agreements for grain we purchase with prices based on commodity futures market prices. Those contracts are not considered derivatives and their prices float until fixed by the counterparty. Prior to prices being fixed we may enter into hedging arrangements to reduce the risk changes in prices could have on our purchase price of the grain. Based on our positions, as of June 30, 2019, a 10 percent increase in commodity futures market prices would have a $1.2 million impact to our financial condition, and a 10% decrease in commodity futures market prices would have a $1.0 million impact to our financial condition.

Item 4. Controls and Procedures

Management's Evaluation of Disclosure Controls and Procedures

Based on an evaluation under the supervision and with the participation of our management, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, were effective as of June 30, 2019.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the three months ended June 30, 2019, that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are not a party to any material pending legal proceeding as of June 30, 2019. From time to time, we may be involved in legal proceedings arising in the ordinary course of business.

Item 1A. Risk Factors

There were no material changes in risk factors in the period covered by this report. See the discussion of risk factors in our Annual Report.

Item 6 . Exhibits

(a) Index of Exhibits

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on September 1, 2017)
3.2*	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 of the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2018)
10.1	Form of Performance Stock Unit Award Agreement†
31.1*	Certification of the Chief Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act
31.2*	Certification of the Chief Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) of the Exchange Act
32*	Certification of the Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

*Filed herewith
†Indicates management contract or compensatory plan

SIGNATURE

Pursuant to the requirements of the Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on August 6, 2019.

CALYXT, INC.

By:	/s/ James A. Blome
Name:	James A. Blome
Title:	Chief Executive Officer (Principal Executive Officer)
By:	/s/ William F. Koschak
Name:	William F. Koschak
Title:	Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 10.1

CALYXT, INC.
PERFORMANCE STOCK UNIT AWARD AGREEMENT

Participant: _____________________ **Award: ________ Performance Stock Units**

Grant Date: June 28, 2019

THIS PERFORMANCE STOCK UNIT AWARD AGREEMENT (this "Agreement") is made as of the Grant Date set forth above, by and between Calyxt, Inc., a Delaware corporation (the "Company"), and the participant named above ("Participant") setting forth the terms and conditions of this Award of Performance Stock Units granted to Participant pursuant to the Calyxt, Inc. 2017 Omnibus Incentive Plan, as may be amended from time to time (the "Plan").

1. **Grant.** Effective on the Grant Date, Participant has been granted the number of Performance Stock Units indicated above, subject to and pursuant to all terms and conditions stated in this Agreement and in the Plan. Each Performance Share Unit shall represent a contingent right to receive one Share as described more fully herein, to the extent such Performance Share Unit becomes vested and settled pursuant to the terms of this Agreement in Restricted Stock. Capitalized terms used herein and not defined shall have the meaning given such terms in the Plan.

2. **Performance Factor; Vesting; Forfeiture.**

a. As used in this Agreement, the following terms shall have the respective meanings:

i. "Performance Factor" shall be equal to the quotient of the Performance Price divided by the Starting Price expressed as a percentage.

ii. "Performance Price" shall mean the average of (A) the highest weighted average Fair Market Value per Share for the trading days within any thirty (30) day period within the Performance Period (the "First Measurement Price") and (B) weighted average Fair Market Value per Share for the trading days within the thirty (30) day period ending on the last day of the Performance Period (the "Last Measurement Price"); provided that no trading day may be used more than once in the calculation of the First Measurement Price and the Last Measurement Price.

iii. "Period Performance Factors" shall be equal to the two quotients of (A) the First Measurement Price divided by the Starting Price and (B) the Last Measurement Price divided by the Starting Price, each expressed as a percentage.

iv. "Starting Price" shall mean $12.48.

v. "Vesting Percentage" shall mean the percentage determined by reference to the Performance Factor referred to below:

	Performance Factor	Vesting Percentage
Minimum	At least 160.20%	50%
Target	At least 240.35%	100%
Maximum	At least 320.50%	120%

To the extent the Performance Factor is less than the Minimum Performance Factor, the Vesting Percentage shall be zero. To the extent either of the Period Performance Factors is less than the Minimum Performance Factor, the Vesting Percentage shall be zero. To the extent the Performance Factor is between Minimum Performance Factor and Target Performance Factor, the Vesting Percentage will be between 50% and 100% calculated on a linear basis. To the extent the Performance Factor is between Target Performance Factor and Maximum Performance Factor, the Vesting Percentage will be between 100% and 120% calculated on a linear basis. In no event will the Vesting Percentage exceed 120% regardless of the Performance Factor.

vi. "Performance Period" shall mean the period from the Grant Date to the three (3) year anniversary of the Grant Date.

vii. "Settlement Date" means the last day of the Performance Period.

b. On the Settlement Date, the Performance Stock Units will vest and the Company will issue Participant in settlement of the vested Performance Stock Units such number of Shares of Restricted Stock equal to the number of Performance Stock Units covered by this Award multiplied by the Vesting Percentage, rounded down to the nearest whole Share, which Restricted Stock shall be subject to the Restrictions during the Restricted Period as provided in Section 6. The value of any fractional Share shall be paid to Participant in cash equal to the Fair Market Value of such fractional Share on the Settlement Date. No Restricted Stock will be issued to Participant prior to the Settlement Date and only then to the extent the Performance Stock Units are vested in accordance with this Section 2(b).

c. If the Vesting Percentage shall be zero, the Performance Stock Units shall be forfeited to the Company without payment of any consideration therefor as of the Settlement Date and Participant's rights under this Agreement will terminate effective as of the Settlement Date. If Participant's Continuous Service Status terminates for any reason during the Performance Period, all Performance Stock Units shall be forfeited to the Company without payment of any consideration therefor as of the date of such termination and Participant's rights under this Agreement will terminate effective as of the date of such termination.

3. **No Rights As Stockholder in Performance Stock Units.** Until Restricted Stock is issued in settlement of the Performance Stock Units on the Settlement Date, Participant will not be deemed for any purpose to be, or have rights as, a Company stockholder, including no right to vote or receive dividends with respect to Shares issuable upon settlement of the Performance Stock Units.

4. **Settlement into Restricted Stock.** Participant shall be deemed to be the record owner of the Restricted Stock on the Settlement Date. Certificates evidencing the Restricted Stock shall be deposited with the Company to be held in escrow until such Shares are released to Participant or forfeited in accordance with this Agreement. If any Restricted Stock is forfeited, the Company shall direct the Company's transfer agent and registrar for the Shares to make the appropriate entries in its records showing the cancellation of the certificate for such Restricted Stock and the Shares represented thereby shall have the status as authorized but unissued Common Stock.

5. **Restricted Stock**. During the period from the Settlement Date and until the two (2) year anniversary of the Settlement Date (the "Restricted Period") and subject to earlier termination of the Restricted Period or forfeiture of the Restricted Stock as provided herein, the Restricted Stock, and all rights with respect to the Restricted Stock, may not be sold, assigned, transferred, exchanged, pledged, hypothecated or otherwise encumbered or disposed of, whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect and shall be subject to the risk of forfeiture contained in Section 6 of this Agreement (such limitations on transferability and risk of forfeiture being herein referred to as "Restrictions"), but Participant shall have all other rights of a stockholder of the Company with respect to the Restricted Stock, including, but not limited to, the right to vote and receive dividends on the Restricted Stock.

6. **Forfeiture of Restricted Stock; Lapse of Restrictions.** If Participant's Continuous Service Status terminates for any reason during the Restricted Period, except as provided in Section 8, all Restricted Stock shall be forfeited to the Company without payment of any consideration therefor as of the date of such termination and Participant's rights under this Agreement will terminate effective as of the date of such termination. Upon lapse of the Restrictions following the Restricted Period, the Company shall, as soon as practicable thereafter, deliver to Participant a certificate for the Shares with respect to which the Restrictions have lapsed or direct the Company's transfer agent and registrar to credit Participant's book entry account with such number of Shares; provided that Participant shall be deemed to be the record owner of the Shares on date the Restrictions lapse.

7. **No Transferability of Performance Stock Units; Effect of Death.** The Performance Stock Units and all rights with respect to the Performance Stock Units shall not be sold, assigned, transferred, exchanged, pledged, hypothecated or otherwise encumbered or disposed of, whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect. Any distribution or delivery required to be made to Participant under this Agreement will, if Participant is then deceased, be made to the administrator or executor of Participant's estate. Any such administrator or executor must furnish the Company with (a) written notice of his or her status as transferee, and (b) evidence satisfactory to the Company to establish the validity of the transfer and compliance with any laws or regulations pertaining to said transfer.

8. **Triggering Event.** If a Triggering Event occurs at any time during the Performance Period, (a) the vesting of the Performance Stock Units shall not accelerate notwithstanding anything to the contrary in the Plan or any agreement with Participant; (b) the Performance Period will be deemed to have been terminated immediately before the Triggering Event; (c) if Participant's Continuous Service Status is terminated on the date of the Triggering Event or at any time within the two (2) years following the date of the Triggering Event either (i) by the Company for Without Cause or (ii) by Participant for Good Reason, then the Company will pay Participant an amount in cash equal to the Vesting Percentage (as provided in this Section 8) multiplied by the Performance Stock Units covered by this Award within thirty (30) days following Participant's termination of Continuous Service Status (subject to delay to the extent required in Section 26 of the Plan or Section 9 of this Agreement); provided that for the purposes of calculating the foregoing cash amount, the Vesting Percentage shall be determined based upon a Performance Factor using a Performance Price equal to the highest per Share price offered to stockholders of the Company in the transaction constituting such Triggering Event and provided further that if the resulting Performance Factor that is less than the Minimum Performance Factor, the Vesting Percentage shall be zero and the Performance Stock Units and any rights under this Agreement, including under this Section 8, shall be terminated as of the date of such Triggering Event without payment of any consideration therefor; and (d) the Performance Stock Units shall not be settled in Shares and all rights of Participant under this Agreement and to Shares shall terminate as of date of the Triggering Event and the sole payment shall be cash. Notwithstanding any other provision of this Agreement, if a Triggering Event occurs at any time following the Performance Period but during the Restricted Period, the Restricted Stock issued in accordance with Section 2(b) will fully (100%) vest and the Restrictions shall lapse on the Restricted Stock to the extent such Restrictions have not already lapsed pursuant to Section 6 such that the Restricted Stock will no longer be subject to the restrictions of, and risk of forfeiture under, this Agreement. [**Insert in CEO Awards**: For the purposes of this Section 8, the terms "Without Cause" and "Good Reason" have the respective meanings ascribed to them in the offer letter agreement with Participant dated September 17, 2018, as modified by Section 15(i) of this Agreement.] [**Insert in Other Awards**: For the purposes of this Section 8, the term "Without Cause" has the meaning ascribed to it in the offer letter agreement with Participant dated [_______] and the term "Good Reason" has the meaning ascribed to it in Exhibit A, as modified by Section 15(i) of this Agreement.] As a condition to receipt of any amounts under this Section 8, Participant must execute a general release of claims in favor of the Company, its Affiliates and Subsidiaries, successors and permitted assigns, and their respective officers and directors in a form provided by the Company within five (5) business days of termination of Continuous Service Status. If Participant does not execute the release within the time period set forth in the release (the "Release Execution Period"), Participant will be deemed to have waived any right to payment under this Section 8. If the Release Execution Period begins in one taxable year and ends in another taxable year, payment will not be made until the beginning of the second taxable year.

9. **Administration and Compliance with Section 409A of the Code**. This Agreement is intended to comply with Section 409A of the Code or an exemption thereunder and will be construed, administered and interpreted in accordance with Section 409A of the Code. Notwithstanding any other provision of this Agreement, payments and settlements provided under this Agreement may only be made upon an event and in a manner that complies with Section 409A of the Code or an applicable exemption. Any payments under this Agreement that may be excluded from Section 409A of the Code either as separation pay provided due to an

involuntary separation from service or as a short-term deferral will be excluded from Section 409A to the maximum extent possible. Any payments to be made under this Agreement upon a termination of employment will only be made upon a "separation from service" under Section 409A of the Code. Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A of the Code and in no event will the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by Participant on account of non-compliance with Section 409A of the Code. Notwithstanding any other provision of this Agreement, if any payment or benefit provided to Participant in connection with termination of Continuous Service Status is determined to constitute "non-qualified deferred compensation" within the meaning of Section 409A of the Code and Participant is determined to be a "specified employee" at that time as defined in Section 409A of the Code, then such payment or benefit will not be paid until the first payroll date to occur following the six-month anniversary of the date of termination (the "Specified Employee Payment Date") or, if earlier, on Participant's death. The aggregate of any payments that would otherwise have been paid before the Specified Employee Payment Date (and interest on such amounts calculated based on the applicable federal rate published by the Internal Revenue Service for the month in which Participant's separation from service occurs) shall be paid to Participant in lump sum on the Specified Employee Payment Date and thereafter, any remaining payments will be paid without delay in accordance with their original schedule.

10. **No Right to Continued Service**. The grant of this Award shall not be construed as conferring upon Participant any right to continue his or her employment with the Company for any period of time, nor does it interfere in any way with Participant's right or the Company's right to terminate that relationship at any time, for any reason, with or without cause.

11. **Not Salary, Pensionable Earnings or Base Pay**. Participant acknowledges that this Agreement shall not be included in or deemed to be a part of (a) salary, normal salary or other ordinary compensation, (b) any definition of pensionable or other earnings (however defined) for the purpose of calculating any benefits payable to or on behalf of Participant under any pension, retirement, termination or dismissal indemnity, severance benefit, retirement indemnity or other benefit arrangement of the Company or any Subsidiary or (c) any calculation of base pay or regular pay for any purpose, without the Company's consent.

12. **Forfeiture Upon Breach of Certain Other Agreements**. Participant's breach of any non-competition, non-solicitation, confidentiality, non-disparagement, assignment of inventions or other intellectual property agreement that Participant may be a party to with the Company or any Affiliate, in addition to whatever other equitable relief or monetary damages that the Company or any Affiliate may be entitled to, shall result in automatic rescission, forfeiture, cancellation or return of the Performance Stock Units, the Restricted Stock or any Shares (whether or not vested) held by Participant.

13. **Recoupment/Clawback**. This Award and this Agreement may be subject to recoupment or "clawback" as may be required by applicable law, stock exchange rules or by any applicable Company policy or arrangement, as it may be established or amended from time to time.

14. **Effect of Agreement.** Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof (and has had an opportunity to consult counsel regarding the terms of this Agreement), and hereby accepts this Award and agrees to be bound by its contractual terms as set forth herein and in the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions and interpretations of the Plan Administrator regarding any questions relating to this Award and this Agreement. In the event of a conflict between the terms and provisions of the Plan and the terms and provisions of this Agreement, the Plan terms and provisions shall prevail.

15. **Miscellaneous.**

a. **Governing Law; Waiver of Jury Trial.** This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of law. BY RECEIPT OF THIS AWARD, THE PARTICIPANT WAIVES ANY RIGHT THAT THE PARTICIPANT MAY HAVE TO TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED ON, ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE PLAN.

b. **Participant Undertaking; Acceptance.** Participant agrees to take whatever additional action and execute whatever additional documents the Company may deem necessary or advisable to carry out or give effect to any of the obligations or restrictions imposed on either Participant or this Award pursuant to this Agreement. Participant acknowledges receipt of a copy of the Plan and this Agreement and understands that material definitions and provisions concerning this Award and Participant's rights and obligations with respect thereto are set forth in the Plan. Participant has read carefully, and understands, the provisions of this Agreement and the Plan.

c. **Dispute Resolution.** Any dispute or claim arising out of, under or in connection with the Plan or any Award Agreement shall be submitted to arbitration in Delaware and shall be conducted in accordance with the rules of, but not necessarily under the auspices of, the American Arbitration Association rules in force when the notice of arbitration is submitted. The arbitration shall be conducted before an arbitration tribunal, one selected by the Company, one selected by Participant, and the third selected by the first two. Participant and the Company agree that such arbitration will be confidential and no details, descriptions, settlements or other facts concerning such arbitration shall be disclosed or released to any third party without the specific written consent of the other party, unless required by law or court order or in connection with enforcement of any decision in such arbitration. Any damages awarded in such arbitration shall be limited to the contract measure of damages, and shall not include punitive damages.

d. **Entire Agreement; Enforcement of Rights.** This Agreement and the Plan, sets forth the entire agreement and understanding of the parties relating to the subject matter herein and therein and merges and supersedes all prior and contemporaneous discussions, arrangements, agreements and understandings, both oral and written, whether in term sheets, presentations or otherwise, between the parties with respect to the subject matter hereof.

e. **Amendment; Waiver.** Except as contemplated under the Plan, no modification of or amendment to this Agreement that has a material adverse effect on Participant, nor any waiver of any rights under this Agreement, shall be effective unless in writing signed by the parties to this Agreement; provided that the Company may amend or modify this Agreement without Participant's consent in accordance with the provisions of the Plan or as otherwise set forth in this Agreement. The failure by either party to enforce any rights under this Agreement shall not be construed as a waiver of any rights of such party, provided that no waiver of any breach or condition of this Agreement shall be deemed to be a waiver of any other or subsequent breach or condition, whether of like or different nature. Any amendment or modification of or to any provision of this Agreement, or any waiver of any provision of this Agreement, shall be effective only in the specific instance and for the specific purpose for which made or given.

f. **Severability.** If one or more provisions of this Agreement are held to be unenforceable under Applicable Laws, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement and a substantially similar provision shall be inserted that as closely as possible reflects the intent of the parties shall be substituted in place of such unenforceable provision, (ii) the balance of this Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of this Agreement shall be enforceable in accordance with its terms.

g. **Notices.** Any notice required or permitted by this Agreement shall be in writing and shall be deemed sufficient when delivered personally or sent by telegram or fax or forty-eight (48) hours after being deposited in the U.S. mail, as certified or registered mail, with postage prepaid, and addressed to the party to be notified at such party's address as set forth below or as subsequently modified by written notice:

If to the Company:	If to Participant:
Calyxt, Inc. 2800 Mount Ridge Road Roseville, MN 55113-1127 Attention: Chair of Compensation Committee Email: upon request	At Participant's most recent address in the Company's records.

h. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

i. **Successors and Assigns; No Third-Party Beneficiaries.** The Company may not assign its rights or obligations under this Agreement without the prior written consent of Participant except to a successor of the Company. The rights and obligations of Participant under this Agreement may not be assigned without the prior written consent of the Company. This Agreement shall be binding upon and inure to the benefit of (a) Participant, Participant's executors, administrators and heirs and (b) the Company and the successors and permitted assigns of the Company. The failure of the Company to assign this Agreement to a successor to the Company or failure of a successor to the Company to explicitly assume and agree to be bound by the Agreement shall be "Good Reason" for the purposes of Section 8. Except as provided in this Section 15(i), nothing in this Agreement, express or implied, is intended to confer on any Person other than the Company and Participant, and their respective heirs, successors, legal representatives and permitted assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement.

16. **Data Privacy Notice and Consent.** By participating in the Plan, Participant consents to the holding and processing of personal information provided by Participant to the Company or any subsidiary, trustee or third-party service provider, for all purposes relating to the operation of the Plan. These include, but are not limited to:

a. administering and maintaining Participant records, a dissolution or liquidation of the Company;

b. providing information to the Company, Subsidiaries, trustees of any employee benefit trust, registrars, brokers or third-party administrators of the Plan;

c. providing information to future purchasers or merger partners of the Company or any Subsidiary, or the business in which Participant works; and

d. transferring information about Participant to any country or territory that may not provide the same protection for the information as Participant's home country.

17. **Tax Withholding.** As a condition precedent for the delivery by the Company of Shares in settlement of the Performance Stock Units or upon lapse of Restrictions on the Restricted Stock, or any other amount or benefit provided under this Agreement, and as further set forth in Section 15 of the Plan, Participant agrees to make adequate provision for federal, state or other tax withholding obligations, if any, which arise upon the grant, vesting or settlement of the Performance Stock Units or the grant, vesting or lapse of Restrictions on the Restricted Stock, dividend distribution thereon, whether by withholding, direct payment to the Company, or by surrendering Shares (either directly or by stock attestation) that Participant previously acquired. Regardless of any action the Company takes with respect to any or all income tax, social security, payroll tax, or other tax-related items related to Participant's participation in the Plan and legally applicable to Participant ("Tax-Related Items"), Participant acknowledges that the ultimate liability for all Tax-Related Items is and remains Participant's responsibility and may exceed the amount actually withheld. Participant further acknowledges that the Company (a) makes no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of this Award, including, but not limited to, the grant, vesting, settlement of the Performance Stock Units, the issuance of Shares upon lapse of Restrictions on the Restricted Stock, or any other amount or benefit provided under this Agreement and (b) does not commit to and is under no obligation to structure the terms of the grant or any aspect of this Award to reduce or eliminate Participant's liability for Tax-Related Items or achieve any

particular tax result. In the event Participant fails to make adequate provision for applicable tax withholding obligations (or where the amount of money provided is insufficient to satisfy the applicable obligations), Participant authorizes the Company, in its discretion, to satisfy the obligations with regard to all Tax-Related Items by (i) withholding from Participant's wages or other cash compensation paid to Participant, (ii) retaining Shares issuable to Participant upon lapse of Restrictions on the Restricted Stock, or (iii) a combination of the foregoing. Notwithstanding the foregoing, in no event shall payment of Tax-Related Items be made by delivery or retention of Shares exceeding the amount necessary to satisfy the Tax-Related Items at the maximum statutory withholding rates.

18. **Blackout Periods.** Participant acknowledges that, to the extent the vesting or settlement of any Performance Stock Units occur during a "blackout" period wherein certain employees, including Participant, are precluded from selling Shares, the Administrator retains the right, in its sole discretion, to defer the delivery of the Shares (including Restricted Stock) pursuant to the Performance Stock Units; provided, however, that the Administrator will not exercise its right to defer Participant's receipt of such Shares if such Shares are specifically covered by a trading plan of Participant that conforms to the requirements of Rule 10b5-1 of the Exchange Act and the Company's policies and procedures with respect to Rule 10b5-1 trading plans and such trading plan causes such shares to be exempt from any applicable blackout period then in effect. In the event the receipt of any Shares is deferred hereunder due to the existence of a regularly scheduled blackout period, such Shares will be issued to Participant on the first business day following the termination of such regularly scheduled blackout period; provided, however, that in no event will the issuance of such Shares be deferred subsequent to March 15th of the year following the year in which the Performance Stock Units are vested and settled. In the event the receipt of any Shares is deferred hereunder due to the existence of a special blackout period, such Shares will be issued to Participant on the first business day following the termination of such special blackout period as determined by the Company's General Counsel or his or her delegatee; provided, however, that in no event will the issuance of such Shares be deferred subsequent to March 15th of the year following the year in which such Shares vest. Notwithstanding the foregoing, any deferred Shares will be issued promptly to Participant prior to the termination of the blackout period in the event Participant ceases to be subject to the blackout period. Participant hereby represents that he or she accepts the effect of any such deferral on Participant's liability for Tax-Related Items or otherwise.

IN WITNESS WHEREOF, the Company has executed and delivered this Agreement as of the Grant Date.

CALYXT, INC.

By: ____________________________

Its: ____________________________

[**Insert in Other Awards**: **<u>EXHIBIT A</u>**

"<u>Good Reason</u>" means:

The Company takes any of the following actions without Participant's consent: (a) a material and adverse change in job title or a material diminution in authority, job duties or responsibilities; (b) a reduction in base salary or a material reduction in employment benefits; or (c) assignment to any work location more than fifty (50) miles from the Company's headquarters as of the Grant Date.

The Company and Participant agree that "Good Reason" shall not exist unless and until Participant provides the Company with written notice of the acts alleged to constitute Good Reason within ninety (90) days of Participant's knowledge of the occurrence of such event, and the Company fails to cure such acts within thirty (30) days of receipt of such notice, if curable. Participant must terminate Participant's employment within sixty (60) days following the expiration of such cure period for the termination to be on account of Good Reason.]

Exhibit 31.1

CERTIFICATION PURSUANT TO RULES 13a-l4(a) AND l5d-l4(a)
UNDER THE SECURITIES EXCHANGE ACT, AS AMENDED

I, James A. Blome, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Calyxt, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and I 5d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 6, 2019

/s/ James A. Blome
James A. Blome
Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO RULES 13a-14(a) AND 15d-14(a)
UNDER THE SECURITIES EXCHANGE ACT, AS AMENDED

I, William F. Koschak, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Calyxt, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(t) and 15d-15(t)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 6, 2019

/s/ William F. Koschak
William F. Koschak
Chief Financial Officer

Exhibit 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Calyxt, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 6, 2019

/s/ James A. Blome
James A. Blome
Chief Executive Officer

/s/ William F. Koschak
William F. Koschak
Chief Financial Officer